

USSN 09/286,166

-3-

REMARKS

Claims 1-42 were originally present in the application and claims 2-42 were canceled in the filing papers under 37 C.F.R. 1.53(b). Claim 1 now also has been canceled and new claims 43-51 have been added. Accordingly, claims 43-51 are currently pending in the application.

Claims 43-51 have been substantially copied from U.S. Patent Number 5,691,188 by Pausch *et al.*, filed on February 14, 1994 and issued on November 25, 1997. Claims 43-51 essentially correspond to claims 15-23 of the '188 patent. Applicants note that claim 45 of the instant application recites "svg1" whereas the corresponding claims of the '188 patent (claim 17) recites "sgv1." Applicants submit that the spelling "sgv1" in the '188 patent is a typographical error and that "svg1" and "sgv1" are the same gene.

Support for the new claims can be found in the instant specification and claims as originally filed, as well as in the applications to which the instant application claims priority. In particular, support for the new claims can be found in parent application USSN 08/041,431, filed on March 31, 1993 (approximately 11 months before the February 14, 1994 filing date of the '188 patent), as outlined in table form below:

USSN 09/286,166

-4-

43. A transformed yeast cell comprising
a reporter gene

page 17, beginning at line 29

under control of a pheromone-responsive
promoter,

page 18, lines 9-13

a heterologous G protein-coupled receptor gene,

page 14, lines 23-26

each said gene being under the control of a
separate promoter,

page 15, lines 14-21 and page 18, lines 6-27

a mutation in a SCG1/GPA1 gene,

page 17, lines 2-5

and a hybrid G α protein.

page 17, lines 12-27

44 The hybrid G α protein of claim 43 comprising
yeast G α protein sequences and heterologous G α
protein sequences.

page 17, lines 12-27

45. The yeast cell of claim 43 further comprising
a gene mutation causing increased sensitivity to
receptor activation selected from the group
consisting of *sst2*, *svg1*,

page 10, lines 9-13, page 11, lines 23-24 and page
21, lines 27-31

ste2, and *ste3*

page 16, lines 22-24, page 22, lines 1-2 and page
23, lines 1-10

46. The yeast cell of claim 45 further comprising
a mutation at a gene that permits transcriptional
activation of pheromone responsive genes without
cell cycle arrest.

page 9, line 33 through page 10, line 1 and page
20, lines 5-12

USSN 09/286,166

-5-

47. The yeast cell of claim 43 wherein the reporter gene is selected from the group consisting of HIS3,

page 10, lines 3-5; page 11, line 25; and page 18, lines 13-17

URA3, LYS2, CAN1, and LacZ, and the pheromone responsive promoter is FUS1.

page 19, line 3 through page 20, line 17, page 22, lines 10-21 and page 23, lines 17-19

48. The yeast cell of claim 47 further comprising a mutation at a FAR1 gene that permits transcriptional activation of pheromone-responsive genes without cell cycle arrest.

page 9, line 33 through page 10, line 1, page 11, lines 23-24, and page 20, lines 10-12

49. The yeast cell of claim 47 further comprising a mutation at a gene that permits transcriptional activation of pheromone-responsive genes without cell cycle arrest.

page 9, line 33 through page 10, line 1 and page 20, lines 5-12

50. The yeast cell of claim 43 further comprising a heterologous G α subunit.

page 16, line 33 through page 17, line 5

51. The heterologous G protein coupled receptor gene of claim 43 which encodes a receptor selected from the group consisting of a β 2 adrenergic receptor, an α -2 adrenergic receptor, a 5HT-1A receptor, a muscarinic acetylcholine receptor, a growth hormone releasing factor receptor and a somatostatin receptor.

page 15, lines 3-8 and pages 39-42

No new matter has been added. Applicants request that the new claims be entered.

New claims 43-51 are directed to transformed yeast cells that express a heterologous G protein coupled receptor and that further comprise *inter alia* a gene

USSN 09/286,166

-6-

Art Unit 1643

mutation in a SCG1/GPA gene and a hybrid Gα protein (claim 43 and dependent claims therefrom). As discussed in the specification of the instant application, and parent applications thereof, the above-described modifications of the claimed transformed yeast cells confer improved and advantageous properties onto the yeast cells.

If a telephone conversation with Applicants' Attorney would expedite the prosecution of the above-identified application, the examiner is urged to call Applicants' Attorney at (617) 227-7400.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Peter C. Lauro", is written over a horizontal line.

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